

REMARKS/ARGUMENTS

Prior to this Amendment, claims 1, 2, 5-8, 10-12, 14-22, 24-28, 31-37, and 39 were pending in the application. Independent claim 28 is amended to include limitations of dependent claim 31, which is canceled. As a result, claim 28 includes limitations in system form as claim 1.

Claims 1, 2, 5-8, 10-12, 14-22, 24-28, 32-37, and 39 remain for consideration by the Examiner.

Rejections Under 35 U.S.C. § 103

In the Office Action of February 27, 2004, claims 1, 2, 5-8, 10-12, 14-22, 24-28, 31-36, and 39 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,633,923 ("Kukura") in view of U.K. Patent No. 2,347,766 A ("Wilson"). The rejection of the claims based on the combination of these references is respectfully traversed based on the following remarks.

As discussed in the prior Amendment with reference to Applicant's specification, Applicant's "present invention provides a mechanism for gaining access to the plug-ins" (see page 17, lines 4-5 with reference to Figure 2). The invention, according to the paragraph beginning at line 18 of page 17, addresses the situation where an application program 302 running in a local environment 308 has need of utilizing a service in the local or distributed environment 310. The invention comprises a service connector 304 that provides a "mechanism through which the application 302 (e.g. the client) can obtain a reference to the service 306 ... and use it." To this end, "the fundamental method utilized is denominated 'getService' and invoking it returns a reference to the actual service 306." "Upon start-up, the application 302 first reads a configuration file...This provides an indicator to the application 302 such that ... the application 302 can instantiate the service connector 304." (see, the paragraph beginning at line 5, page 18) When the getService(version) method is called, the service connector 304 performs a lookup of the service instance, e.g., a specified version of the service desired by the application 302. Embodiments of methods of the invention address the problem of using services not known prior to runtime, and this technique is different than prior art systems that use directories and meta-directories to catalog already known information regarding available services (see, for example, Applicant's Background at page 5, lines 1-13). The invention generally calls for gaining a

reference to a service and returning it to another service or client application and in most embodiments, invoking a service connector interface.

Claims 1, 10, and 28 each call for invoking a service connector interface in conjunction with a second service and then gaining a reference to a first service by the second service by “retrieving a service instance at said service connector interface.” For an example of one such embodiment of the invention, see Applicant’s Figure 2 for retrieval of instances of pluggable interfaces.

Applicant disagrees with the Office Action’s construction of Kukura. The Office Action cites Kukura at col. 5, lines 33-47 (“binding”), col. 42, lines 22-31 (“IOR”), col. 43, lines 1-9, and col. 50, lines 14-18 for teaching retrieving a service instance as part of gaining a reference to a first service. Kukura, however, describes “binding” as resulting in “a chain of initialized interceptor instances at the client and a similar chain at the server” that are used to create a communication channel for a client request (see, for example, col. 5, lines 28-47 and col. 6, lines 30-48). “IORs” are CORBA-defined “Interoperable Object References” (see col. 5, lines 57-67 and beginning at col. 42, line 22). However, there is no support for the rejection of claim 1 found in Kukura’s discussion of its bindings or the use of IORs to present object references. Specifically, Applicant can find no discussion of retrieving a service instance as part of gaining a reference to a service. The Kukura discussion of creation of IORs beginning at col. 49, line 35 does not teach or suggest that ORB or other components described in Kukura “retrieve a service instance.” Wilson does not overcome this deficiency of Kukura. Hence, the rejection based on Kukura and Wilson is unsupported and should be withdrawn.

Claims 2 and 5-8 depend from Claim 1 and are believed allowable for at least the reasons for allowing Claim 1. Further, Claims 6 and 8 are directed to the concept of defaulting to instantiating and then referencing a latest version or latest instance of a service being accessed or requested by client application or “second service.” Wilson is cited for teaching the retrieval of a particular version, but Applicant disagrees that the combination of Kukura and Wilson results in the claimed invention. Wilson merely teaches that a user may view printer drivers available and then select from those displayed. It does not call for a “latest version” to be supplied if none is specified in a request from a client. Claim 7 calls for a particular “instance” to be identified for the first service by the second service. This feature

is not shown by Wilson (or Kukura). For these additional reasons, the rejection of claims 6-8 is unsupported and should be withdrawn.

Claims 11, 12, and 14-18 depend from claim 10 and are allowable as depending from an allowable base claim. Additionally, the arguments provided for allowing claims 6-8 are applicable to claims 14-17, and these claims are allowable for these additional reasons.

Claims 32-36 depend from claim 28 and are allowable at least for the reasons for allowing claim 28. Additionally, the reasons provided for allowing claims 6-8 are applicable to claims 32-35, and these claims are allowable for these additional reasons.

Independent claim 19 is directed to a method that comprises “providing for specifying a particular version of said first service that said second service desires to invoke.” As described with reference to claim 7, the combination of Kukura and Wilson fail to teach obtaining a reference not only to a first service but to a particular version of that first service. Hence, the rejection under 103(a) is not properly supported and should be withdrawn. Claims 20-22 and 24-27 depend from claim 19 and are allowable as depending from an allowable base claim. Additionally, claim 22 comprises “retrieving a service instance at said service connector interface” which, as discussed with regard claim 1, is not shown or suggested by Kukura.

Independent Claim 39 is directed to a method of providing an application with a reference to or access to a particular service. Claim 39 calls for operating the service connector to lookup an instance of a service for which access is requested. From the Office Action, it is not clear where the Office believes this is taught in Kukura, and Applicant asserts that this feature is not shown by this reference at col. 50, lines 13-18 which discusses creation of an IOR to create a new object reference. Additionally, claim 39 calls operating the application to request identification of an interface implemented by the referenced service and then to returning the requested interface identification to the application for use in utilizing the referenced service. Kukura is cited in col. 42, 43, and 50, but Kukura fails to teach an application requesting an interface to the referenced service. Further, claim 39 calls for the request to specify the version of the service in a request, and as discussed with respect to claims 6-8, this is not shown or suggested by Kukura or Wilson. For these reasons, the rejection based on the combination of Kukura and Wilson is unsupported and should be withdrawn.

Rejections Under 35 U.S.C. § 103 of Claim 37

In the Office Action, claim 37 was rejected under 35 U.S.C. §103(a) as being unpatentable over Kukura in view of U.S. Patent No. 6,006,279 (“Hayes”). The rejection of the claim 37 based on the combination of these references is respectfully traversed based on the following remarks.

Initially, **Kukura is not available as a reference under 103(a)** for the elements of claim 37 calling for an application programming interface with plug-in service modules that are attached by providing an initialization parameter comprising a storage location for each of the plug-in service modules. Kukura is cited under 103(a) via 102(e) and claims the benefit of 4 provisional patent applications filed before the filing date of the present application. However, Kukura only is allowed this earlier priority date for material that is fully supported (as required by 35 U.S.C. §112) by the earlier filed provisional patent applications. In this regard, Kukura fails to teach an application programming interface with plug-ins providing a service that is requested in a processed request. Specifically, U.S. Provisional Application No. 60/117,938 at page 5, line 18 states “On-demand loading of plug-ins has not yet been designed or implemented.” As a result, Kukura is not available under 103(a) via 102(e) for teaching of plug-ins for providing requested services. Without Kukura, Hayes alone does not teach or suggest each of the limitations of claim 37, and the rejection of claim 37 under 103(a) should be withdrawn.

Further, even if Kukura were available as a 103(a) reference, the combination of the Kukura and Hayes references fails to teach or suggest all of the limitations of claim 37. Independent Claim 37 is directed to a core profile engine as shown in Figure 2 with a pluggable interface for use in attaching to service modules and including a service connector associated with each attached service module. Claim 37 calls for “a pluggable interface attaching to the plug-in service modules” “wherein the pluggable interface further includes a service connector...adapted to receive the service request from the application programming interface and to return a reference to the one service module ...” Further, Claim 37 calls for the plug-in service modules to be selected from an authorization plug-in, an authentication plug-in, a notification plug-in, a log plug-in, a group plug-in, an entity identification factory plug-in, and a replication plug-in.

The Office Action states that Kukura teaches all of the limitations of Claim 37 except the specific plug-ins. However, Kukura fails to teach "a service connector associated with each of the attached plug-in service modules that is adapted to receive the service request from the application programming interface and to return a reference to the one service module providing the service based on the storage location." Baer fails to teach the idea of receiving a service request and responding by discovering a reference to the service and returning the reference to the requesting service based on a storage location. Hence, Kukura does not teach or suggest each of the limitations of claim 37 except for the specific plug-ins as asserted in the Office Action, and the rejection is unsupported by this reference. Further, Hayes fails to overcome the deficiencies of Kukura. Hence, the combined teaching of Kukura and Hayes does not support a 103(a) rejection of the method of claim 37, and it is respectfully requested that this rejection be withdrawn.

Conclusions

The pending claims are believed in condition for allowance.

No fee is believed due with this response, but any fee deficiency associated with this submittal may be charged to Deposit Account No. 50-1123.

It is respectfully requested that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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